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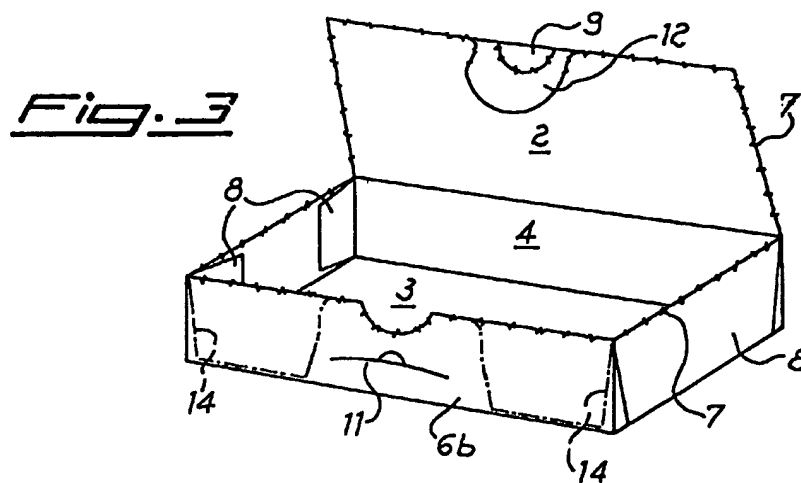
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(54) **Container for prepackaged products**

(57) A box, of a type comprising a single die-cut element (1), folded along a plurality of fold-lines, and provided with a tab (5) glued to the first side (6) to form the body of a box and a plurality of flaps (8) which can be closed after the contents have been added, having a

second side (2) provided with pre-stamped tear-lines (7) to allow partial detachment of the said side (2) from the adjacent sides and the consequent opening of the box in the area of the said side (2).



Description

The present invention relates to a box for pre-packed products. In particular, the present invention relates to a box to contain medical, cosmetic or similar products, where such products are already in some form of primary packaging e.g. phial, ampoule, blister-pack, sachet, sticking-plasters etc.

Boxes (or wallets) of this kind have been known for some time. One of the drawbacks of such boxes is that they can be opened and then closed after the surreptitious removal of part of the contents. This leads to an obvious problem for the purchaser, who may find that he has bought a partly-full pack without being able to pre-check the integrity of its contents.

Another problem of the known box is the need to be used on high-speed packing lines, where the box is fed as a flattened tube - with seam glued but sides open - which is subsequently erected, before being filled with contents and closed at the sides.

A further problem of the known box is to have ready access to the contents and to allow the box to be closed between one withdrawal and the next.

U.S. Patent No. 4.284.105 describes a box for cigarettes or sweets where the lid is rendered solid with the box by a part having pre-stamped tear-lines which are ruptured in the act of raising the lid.

U.S. Patent No. 5.123.589 describes a box to contain flat objects (e.g. photographs) where the lid is formed by a central tongue and two lateral winglets glued to the outside of the box but ruptures along pre-stamped tear-lines to open the box. Access to the contents is facilitated by a rectangular opening on the front of the box. The box has a means of temporary closure in that the tongue on the lid can be inserted into a slit on the front of the box.

European Patent Application No. 94104078.4, filed on 16.03.94 with Italian priority of 19.03.93 in the name of Grafiche Eikon, describes a box for medicines and similar products formed by folding and gluing a single die-cut stamping. The box formed, on being opened, gives access through a missing section of one of the sides and can be re-closed folding over an extension of one of the sides and attaching it to the box itself.

The aim of the present invention is to overcome the aforementioned drawbacks by means of a box which allows the integrity of the contents to be checked, can be filled at high speed, gives facilitated access to the contents and is low-cost. This aim is achieved by the present invention which relates to a box of the type formed from a single stamped element, folded along a plurality of score-lines, and having a tab glued to its first side to form the body of the box and a plurality of flaps which are closed once the contents are filled, characterized according to Claim 1.

In other words, the pre-stamped tear-lines (there are usually at least two) allow the box to be opened from the side on which they are provided. The access opening corresponds to a side (or part thereof) of the same

box.

According to a preferred embodiment of the present invention the pre-stamped tear-lines are along three adjacent edges of the box.

According to another preferred embodiment of the present invention, the box is characterized by one of the said pre-stamped tear-lines corresponding to at least part of the common edge between the gluing-tab and the opening side.

According to another preferred embodiment of the present invention, the box is provided with a means of temporary closure consisting in a tongue which is on the gluing-tab and an integral part of the opening side of the box.

The box according to the present invention has the following advantages:

access to the contents is optimum, in that the opening corresponds to one of the sides of the box, or a good part of it; any interference is readily obvious; the box is very compact and this limits the consumption of raw materials (e.g. paperboard) used; moreover, the shape of the initial die-cut stamping is such as to reduce the waste to a minimum.

These characteristics render the box according to the present invention very quick to fill and thus suitable to be produced on very high-speed machines.

The present invention will now be described in more detail with reference to the attached drawings, which are of an illustrative and not limiting nature, in which:

- fig.1 is a perspective view of the box according to the present invention;
- fig.2 is a schematic view of the die-cut stamping;
- figs.3 and 4 are views corresponding to figs.1 and 2 of another box according to the present invention;
- figs.5 and 6 are views corresponding to figs.1 and 2 of a third box according to the present invention;
- figs.7 and 8 are views corresponding to figs.1 and 2 of a box according to the present invention similar to that of figs.3 and 4;
- fig.9 is a perspective view of an embodiment similar to that of figs.1 and 2;
- fig.10 is a perspective view of an embodiment similar to that of figs.3 and 4;
- fig.11 is a plan view of another embodiment similar to that of figs.3 and 4.

Referring to figs.1 - 11, the box according to the present invention comprises substantially a die-cut stamping 1a, preferably in cardboard, of the type normally used to contain medicines, cosmetics and similar products (e.g. phials, blister-packs, sachets, plasters, etc.). The above list of examples should not be interpreted as limiting the protection to only the aforementioned products.

By "die-cut stamping" is intended any element obtained by die-cutting, independent of the material

used, as well as any element obtained by other techniques e.g. pressing. The preferred base is a light cardboard die-cut stamping.

According to the present invention, there are pre-stamped tear-lines on the stamping corresponding to one of the sides of the box, to allow partial detachment to open the box. The pre-stamped tear-lines on the stamping are usually located along at least, part of two of the edges of the opening side, where "edges" means both the fold-line itself of the box and a side area of greater or lesser extent, adjacent to that fold-line (see figs. 9 and 10).

Referring to fig.2, the die-cut stamping 1a has a plurality of sides 2-4, 5a and 6a which are arranged together in a known way to form the body of the box.

In detail, the sides are: the first or adhesive side 6a, the second or opening side 2, the transverse side 4 opposite side 6a, the longitudinal side 3 opposite side 2, and a gluing-tab 5a. The side 2 comprises the opening side of the box and carries a pre-stamped tear-line 7 on three adjacent edges, while the edge between side 2 and side 6a is whole (not perforated).

To form the box, the stamping is folded along the fold-lines marked on it, the tab 5a is glued to the adhesive side 6a, and the flaps 8 are glued to each other (after the contents have been inserted).

The box is opened by separating the opening side 2 from the three adjacent sides, exploiting the presence of the pre-stamped tear-lines 7. Opening the box is facilitated by the presence of a pre-stamped invitation means 9, defined on the side 4 by the pre-stamped tear-line 10 and the fold-line 10a between the side 2 and side 4.

Fig. 1 shows the box after it has been opened, with the gluing-tab 5a clearly visible inside the box.

The embodiment shown in figs. 1 and 2 cannot be re-closed, but the invention provides for a means of temporary attachment to the box body.

Figs. 3 and 4 show a second embodiment of the present invention. According to this embodiment, the die-cut stamping 1b has in particular a gluing-tab 5b comprising two portions 14 (which can be separated from the opening side 2 by pre-stamped tear-lines 7) and a tongue 12 which is integral with the body of the box along the fold-line 16a where the pre-stamped tear-lines 7 is interrupted. Furthermore, the portions 14 can be separated from the tongue 12 by the pre-stamped tear-lines 16. The gluing-tab 5b is glued to the adhesive side 6b by restricting the glue to the portions 14 and not gluing the tongue 12. There is a pre-stamped invitation means 9 on the adhesive side 6b to facilitate opening the box.

The box is opened in a similar way to that described above; in this case, however, the pre-stamped tear-lines 7 are located along the fold-line between the side 2 and the gluing-tab 5b. When the lines 7 are ruptured, portions 14 of the gluing-tab 5b, which remain attached to the side 6b, separate from side 2, thus freeing the tongue 12 which remains part of side 2. This tongue can

be engaged in slit 11 to provide a means of temporary closure of the box.

Fig. 3 shows the box open; the broken lines indicate the position of the portions 14 of the gluing-tab 5b attached to the inside of the box.

Figs. 7 and 8 show an embodiment very similar to that of figs. 3 and 4.

In this case, as can be seen in fig. 8, the opening side 2 and the opposite side 3 are transverse sides and the adhesive side 6d and side 4 opposite it are longitudinal sides.

Similar to the preceding example, the stamping 1d has a gluing-tab 5d comprising two portions 25 which can separate from side 2 along lines 7 and from tongue 12 along lines 16. The operation of the box is exactly the same as in the previous example and fig. 7 shows the box open; the positions of portions 25 glued to the inside of the box can be seen.

Figs. 5 and 6 show a third embodiment according to the present invention. According to this embodiment, the stamping 1c has a gluing-tab 5c comprising two portions 23 which can separate from the tab 5c along pre-stamped tear-lines 18. The adhesive side 6c is integral, through pre-stamped tear-line 19 with a further portion 15 which is folded during assembly of the box and glued to the outside of the gluing-tab 5c. During opening of the box, the portion 15 and the invitation means 9 are separated from the adhesive side 6c along the pre-stamped tear-line 19.

After the folding of the stamping 1c the said portions 23 are glued to the adhesive side 6c, over portion 15.

The tab 5c has a tongue 12 which can be engaged in a slit 11 to form a means of temporary closure of the box. Fig. 5 shows the position of the portions 23 adhering to the inside of the box.

Fig. 9 shows an embodiment similar to that of figs. 1 and 2; in this embodiment the opening side 2 has diagonal pre-stamped tear-lines 26 extending into side 4, and an invitation means 9 defined by the pre-stamped tear-line 28. The box is opened (not shown) by pressing the invitation means 9 and the area 27 with a finger and separating the opening side 2 from the box along pre-stamped tear-lines 7 and 26.

Fig. 10 shows an embodiment similar to that of figs.3 and 4; in this embodiment the opening side 2 has diagonal pre-stamped tear-lines 26 extending along the edge which separates the opening side 2 from the adhesive side 6e.

The gluing-tab (not shown) is similar to the gluing-tab 5b of fig.4 and has a non-glued tongue 12 and portions 14 glued to the adhesive side 6e inside the body of the box in a manner very similar to that of the embodiment shown in figs. 3 and 4. The opening of the box is facilitated by invitation means 9 pre-stamped in the side 6e and a means of temporary closure is provided by the tongue 12 being engaged in the slit 11.

In all the embodiments shown previously the flaps 8 can be closed by interlocking instead of gluing. As an

illustrative but not limiting example, fig. 11 shows a plan view of a stamping similar to that of figs. 3 and 4 in which the flaps 8 adjacent to the opening side 2 have been replaced by substantially rectangular flaps 29 ending in a folding tab 30, while those flaps 8 adjacent to the side 3 have been eliminated. 5

Claims

1. A box, of a type comprising a single die-cut element 10
(1), folded along a plurality of fold-lines, and provided with a tab (5) glued to a first side (6) to form the body of a box and a plurality of flaps (8) which can be closed after the contents have been added, characterized in that a second side (2) of the box is 15
provided with pre-stamped tear-lines (7) to allow partial detachment of said side (2) from the adjacent sides and the consequent opening of the box in the area of the said side (2). 20
2. A box according to Claim 1, characterized by the pre-stamped tear-lines (7) being located along at least part of two or more adjacent edges.
3. A box according to Claim 1 or 2, wherein by one of 25
said pre-stamped tear-lines (7) is located along at least part of the common edge between said gluing-tab (5) and said opening side (2).
4. A box according to Claims 1 - 3, wherein by the said 30
opening side (2) has a means of temporary attachment to the body of the box after it has been opened.
5. A box according to Claim 4, wherein by the means 35
of temporary attachment are a die-cut tongue (12) pre-stamped on the said gluing-tab (5) in a non-glued area of the said tab, the said tongue (17) being an integral part of the said opening side (2) of the box. 40
6. A box according to Claim 5, wherein the said tongue (12) is able to engage in a slit (11) provided in said first side (6). 45
7. A box according to Claim 2, wherein the first side 50
(6) has a portion (15) folded and glued to the said gluing-tab (5), one of said tear-lines (19) being provided between said first side (6) and its folded portion (15). 50
8. A box according to any preceding Claim, wherein one of the sides adjacent to said opening side (2) has a means of invitation (9) to facilitate said opening of the box along said pre-stamped tear-lines (7). 55

Fig. 1

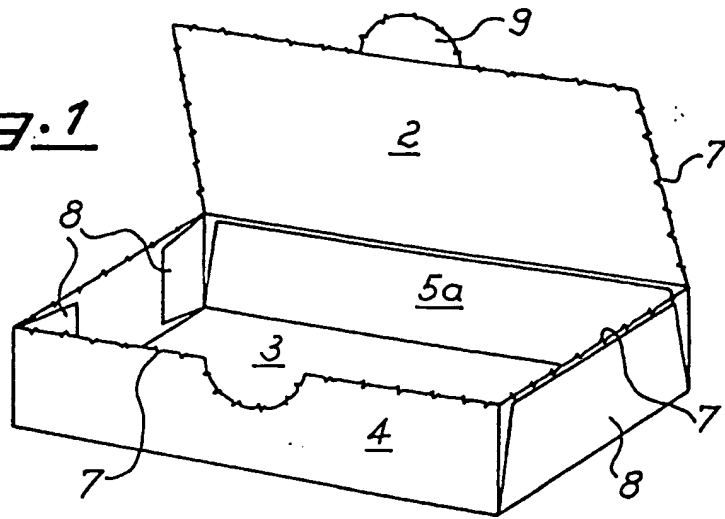


Fig. 2

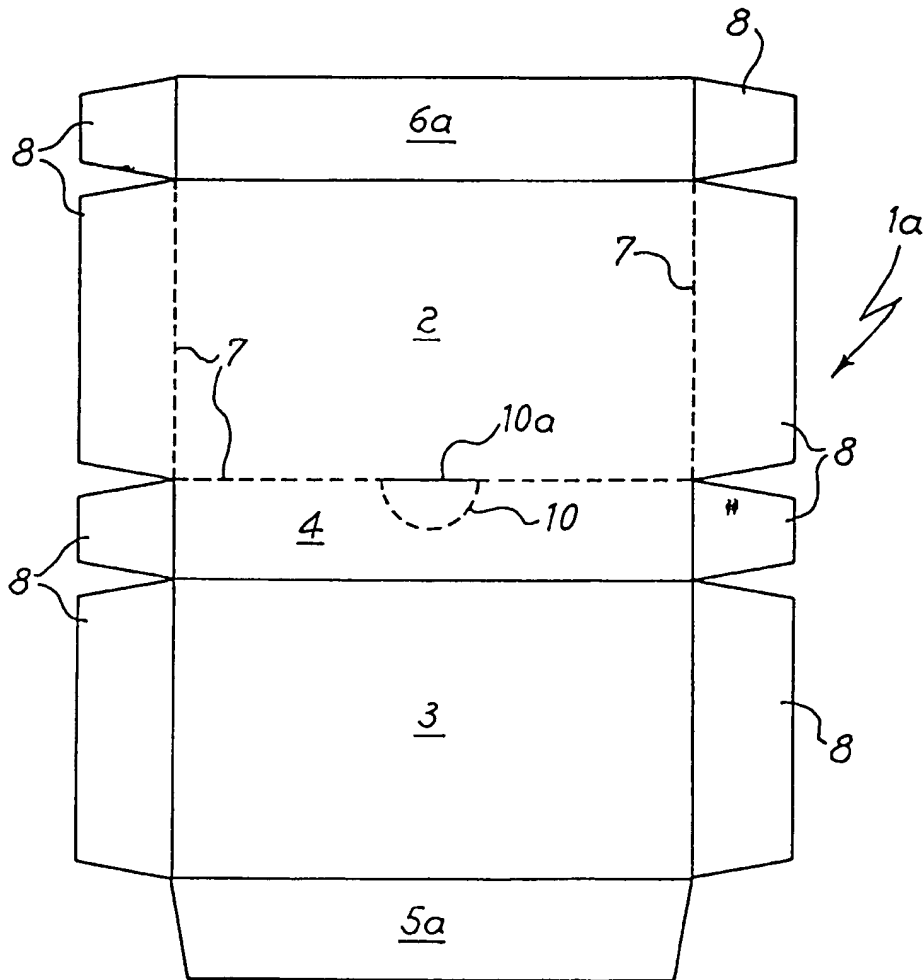


Fig. 3

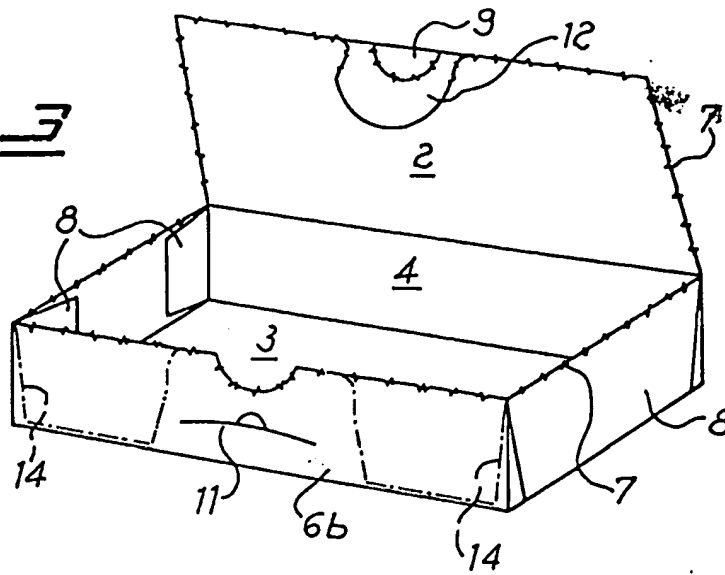
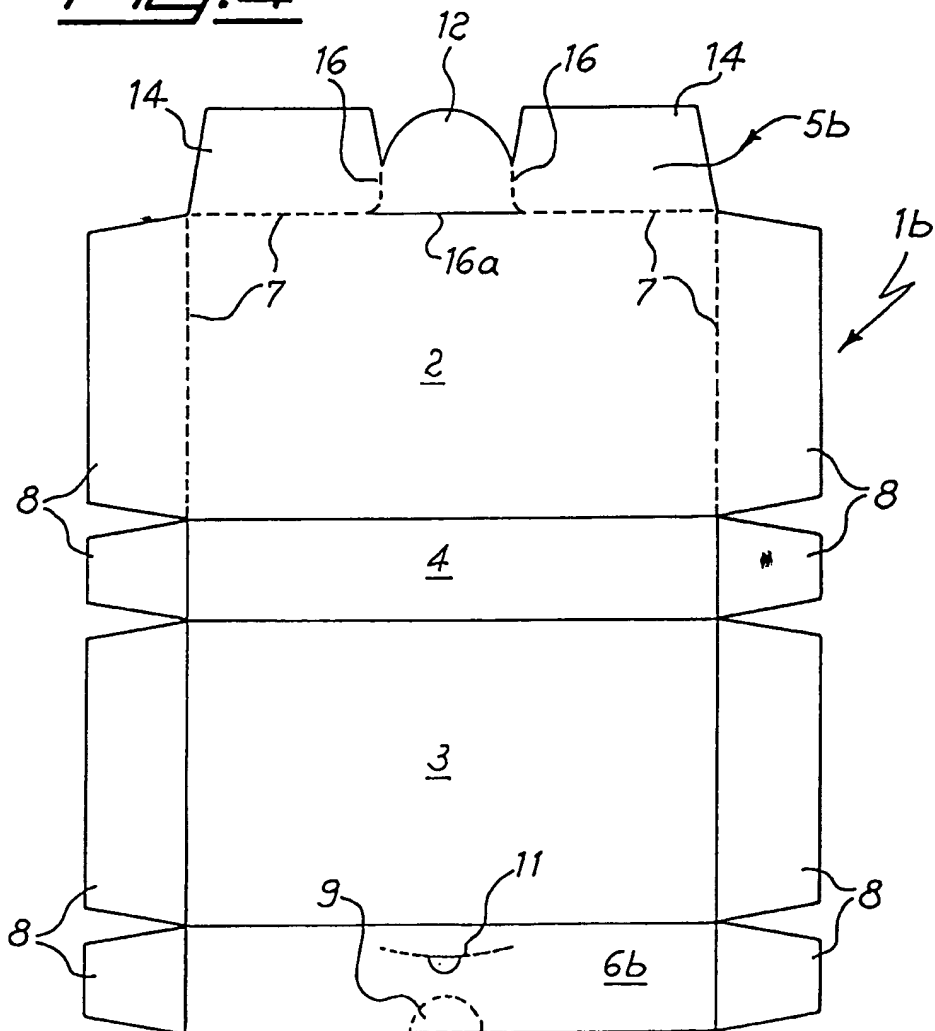


Fig. 4



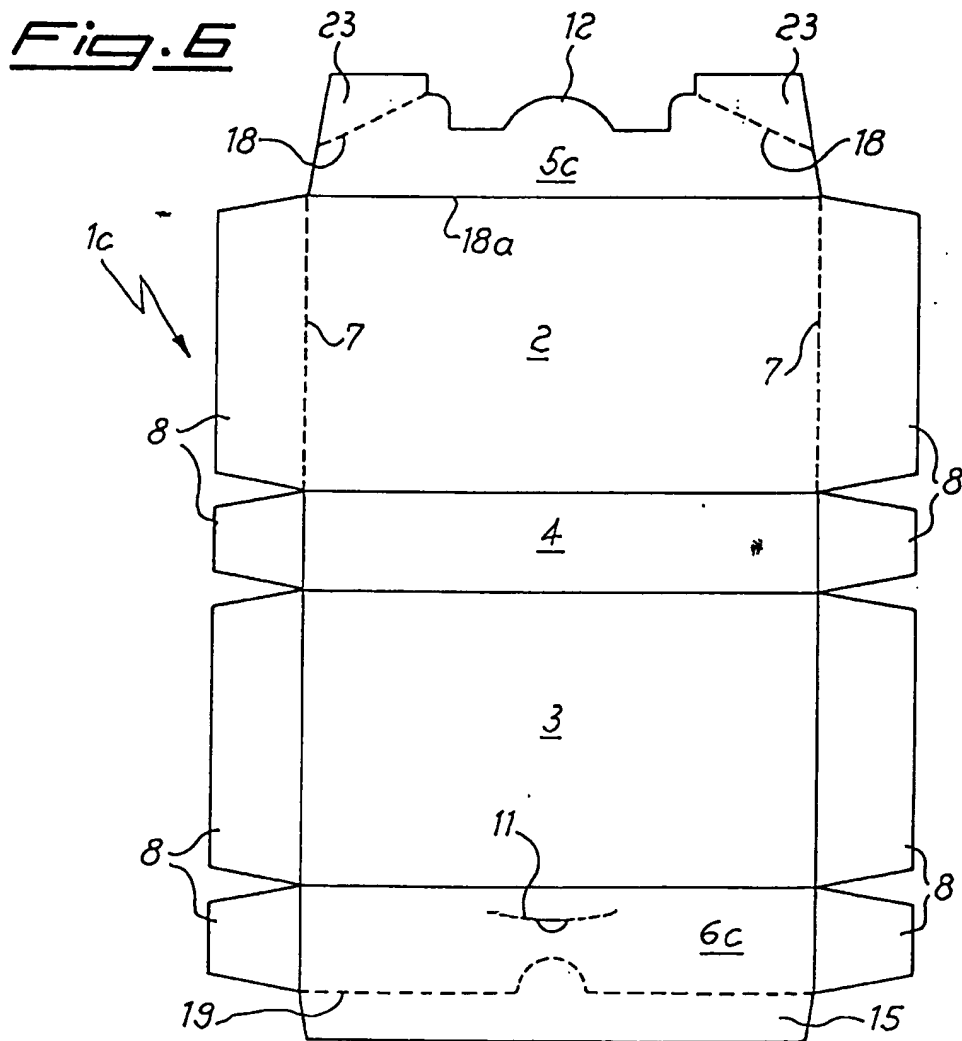
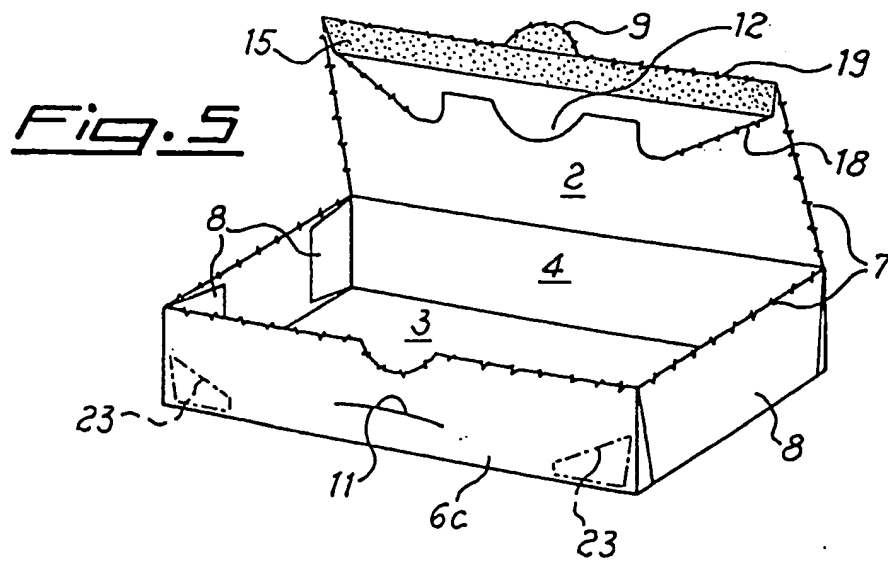


Fig. 7

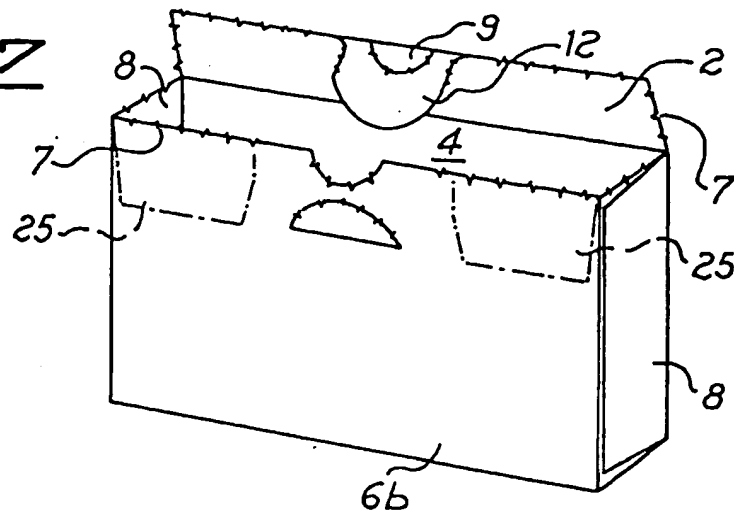


Fig. 8

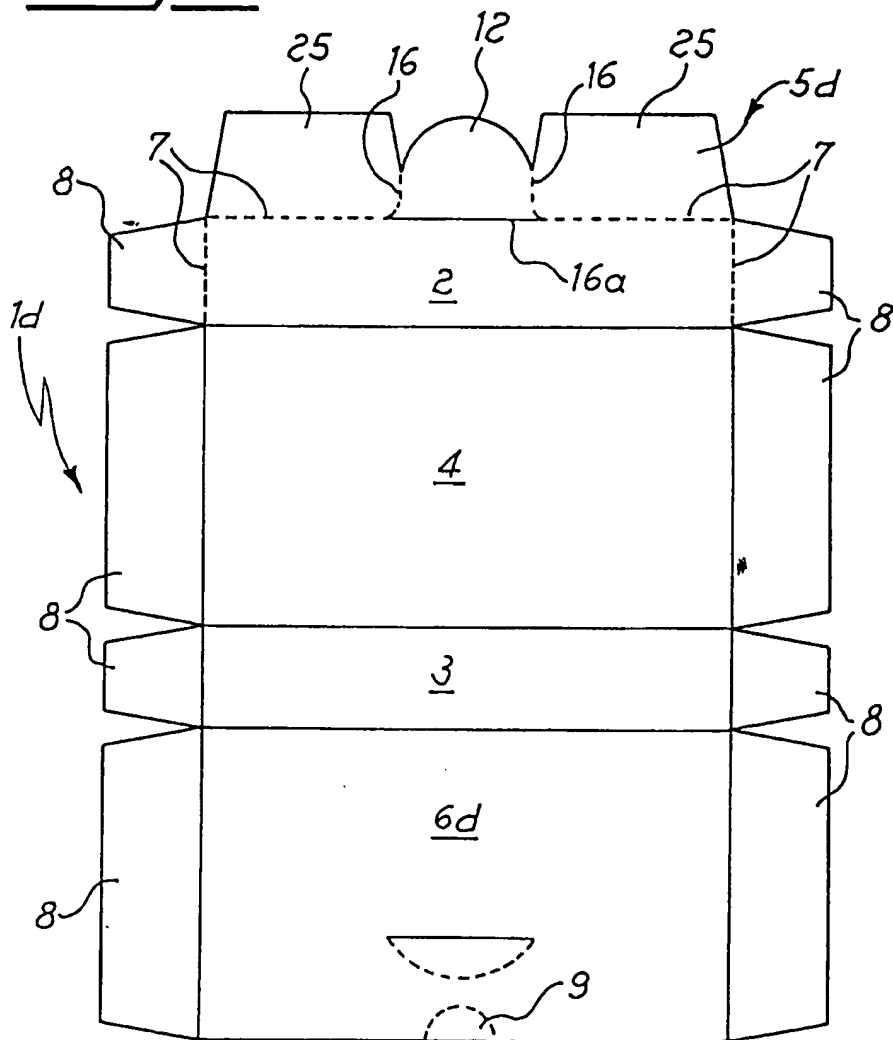


Fig. 9

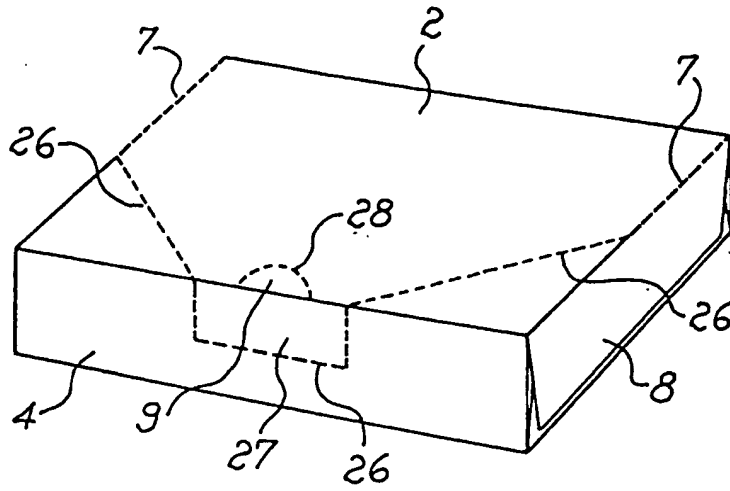


Fig. 10

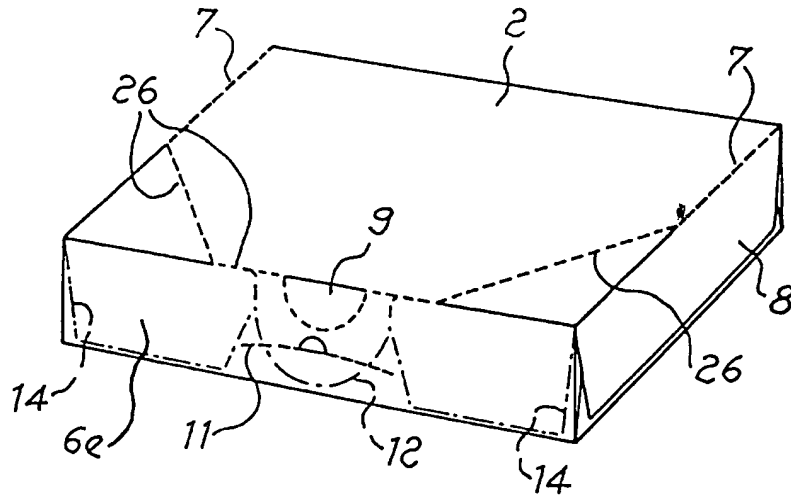


Fig. 11

